

CLAIMS

1. Composition comprising an oil phase, an aqueous phase, at least one emulsifying agent of water-in-oil (W/O) type and at least one emulsifying agent of oil-in-water (O/W) type in the form of a self-invertible inverse latex comprising from 20% to 70% by weight and preferably from 25% to 50% by weight of a branched or crosslinked polyelectrolyte, characterized in that the said polyelectrolyte is either a homopolymer based on a monomer having either a partially or completely salified strong acid functional group or a partially or completely salified weak acid functional group, or a copolymer based on at least one monomer having a strong acid functional group copolymerized either with at least one monomer having a weak acid functional group or with at least one neutral monomer, or a copolymer based on at least one monomer having a weak acid functional group copolymerized with at least one neutral monomer, and characterized in that the constituent solvent of the oil phase is chosen from fatty acid esters.

2. Composition as defined in Claim 1, in which the constituent solvent of the oil phase is chosen from compounds formula (I):

$$R_1-(C=O)-O-[[CH_2-CH[O-(C=O)]_m-R_2]-CH_2-O]_n-[C(=O)]_p-R_3 \quad (I)$$

in which:

R_1 represents a saturated or unsaturated and linear or branched hydrocarbonaceous chain comprising from 7 to 30 carbon atoms,

R_2 represents, independently of R_1 , a hydrogen atom or saturated or unsaturated and linear or branched hydrocarbonaceous chain comprising from 7 to 30 carbon atoms,

R_3 represents, independently of R_1 or of R_2 , a hydrogen atom or saturated or unsaturated and linear or branched hydrocarbonaceous chain comprising from 1 to 30 carbon atoms,

m, n, p and q are, independently of one another, equal to 0 or to 1, it being understood that, when R_3 represents a hydrogen atom, q is other than 0.

3. Composition as defined in Claim 2, for which, in the formula (I), R_1 , R_2 and R_3 represent, independently of one another, a radical chosen from the heptyl, octyl, nonyl, decyl, undecyl, dodecyl, tridecyl, tetradecyl, pentadecyl, hexadecyl, heptadecyl, octadecyl, nonadecyl, icosyl, unicosyl, docosyl, heptadecenyl, icosenyl, unicosenyl, docosenyl or heptadecadienyl or decenyl radicals.

4. Composition as defined in Claim 3, for which, in the formula (I), the $R_1-C(=O)-$ group represents one of the octanoyl (caprylyl), decanoyl, undecylenoyl, dodecanoyl (lauroyl), tetradecanoyl (myristyl), hexadecanoyl (palmitoyl), octadecanoyl (stearyl), icosanoyl (arachidoyl), docosanoyl (behenoyl), 8-octadecenoyl (oleyl), icosenoyl (gadoleyl), 13-docosenoyl (erucyl), 9,12-octadecadienoyl (linoleoyl) or 9,12,15-octadecatrienoyl (linolenoyl) radicals.

5. Composition as defined in any one of Claims 2 to 4, for which the constituent solvent of the oil phase of the inverse latex is a compound of formula (Ia):

$R_1-(C=O)-O-CH_2-CH[O-[C(=O)]_m-R_2]-CH_2-O-[C(=O)]_p-R_3$ (Ia)
corresponding to the formula (I) in which q and n are equal to 1, or a mixture of compounds of formulae (Ia).

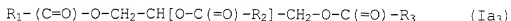
6. Composition as defined in Claim 5, for which the constituent solvent of the oil phase of the inverse latex is a compound of formula (Ia₁):

$R_1-(C=O)-O-CH_2-CH(OH)-CH_2-OH$ (Ia₁)
corresponding to the formula (Ia) in which m and p are equal to 0 and R_2 and R_3 represent a hydrogen atom.

7. Composition as defined in Claim 5, for which the constituent solvent of the oil phase of the inverse latex is a compound of formula (Ia₂):

$R_1-(C=O)-O-CH_2-CH(OH)-CH_2-O-C(=O)-R_3$ (Ia₂)
corresponding to the formula (Ia) in which p is equal 1, m is equal to 0 and R_2 represents a hydrogen atom.

8. Composition as defined in Claim 5, for which the constituent solvent of the oil phase of the inverse latex is a compound of formula (Ia₃):



- 5 corresponding to the formula (Ia) in which m and p are equal to 1.

9. Composition as defined in Claims 5 to 8, for which the constituent solvent of the oil phase of the inverse latex is a mixture of compounds of formulae (Ia₁), (Ia₂)

- 10 and/or (Ia₃).

10. Composition as defined in any one of Claims 2 to 4, for which the constituent solvent of the oil phase of the inverse latex is a compound of formula (Ib):



- 15 corresponding to the formula (I) in which q is equal to 0, or a mixture of compounds of formulae (Ib).

11. Composition as defined in Claim 10, for which the constituent solvent of the oil phase of the inverse latex is octyl palmitate.

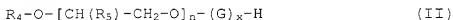
- 20 12. Composition as defined in Claims 5 to 11, for which the constituent solvent of the oil phase of the inverse latex is a mixture of at least one compound of formula (Ib) and of at least one compound of formulae (Ia).

- 25 13. Composition as defined in any one of Claims 1 to 12, in which the emulsifying agent or agents of the water-in-oil type are chosen from sorbitan monooleate, sorbitan isostearate or sorbitan oleate ethoxylated with 5 mol of ethylene oxide.

- 30 14. Composition as defined in any one of Claims 1 to 13, in which the emulsifying agent or agents of the water-in-oil type are chosen from sorbitan oleate ethoxylated with 20 mol of ethylene oxide, ethoxylated castor oil comprising 40 mol of ethylene oxide,
35 ethoxylated sorbitan laurate comprising 20 mol of ethylene oxide, or ethoxylated lauryl alcohol comprising 7 mol of ethylene oxide.

15. Composition as defined in any one of Claims 1 to 14, in which the emulsifying agent or agents of the

oil-in-water type are chosen [lacuna] the compounds of formula (II):



in which R_4 represents a saturated or unsaturated and linear or branched hydrocarbonaceous radical comprising from 1 to 30 carbon atoms, R_5 represents a hydrogen atom or an alkyl radical comprising 1 or 2 carbon atoms, G represents the residue of a saccharide, x represents a decimal number between 1 and 5 and n is equal either to zero or to an integer 9.

16. Composition as defined in Claim 15, for which, in the formula (II), x is between 1 and 3, more particularly between 1.05 and 2.5, very particularly between 1.1 and 2.0 and preferably less than or equal to 1.5.

17. Composition as defined in either of Claims 15 and 16, for which, in the formula (II), G represents the glucose residue or the xylose residue and n is equal to 0.

18. Composition as defined in any one of Claims 15 to 17, for which, in the formula (II), R_4 represents a radical comprising from 8 to 18 carbon atoms and more particularly an octyl, decyl, undecyl, dodecyl, tetradecyl or hexadecyl radical, the said radicals being linear or branched.

19. Composition as defined in any one of Claims 1 to 18, for which the strong acid functional group of the monomer comprising it is the sulphonic acid functional group or the phosphonic acid functional group, partially or completely salified, and the monomer is preferably 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulphonic acid, partially or completely salified in the form of an alkali metal salt, such as, for example, the sodium salt or the potassium salt, of the ammonium salt, of a salt of an aminoalcohol, such as, for example, the monoethanolamine salt, or of an amino acid salt, such as, for example, the lysine salt.

20. Composition as defined in any one of Claims 1 to 19, for which the weak acid functional group of the monomer comprising it is the carboxylic acid functional group and the said monomer is preferably chosen from

partially or completely salified acrylic acid, methacrylic acid, itaconic acid or maleic acid.

21. Composition as defined in any one of Claims 1 to 20, for which the neutral monomer is chosen from 2-hydroxyethyl acrylate, 2,3-dihydroxypropyl acrylate, 2-hydroxyethyl methacrylate, 2,3-dihydroxypropyl methacrylate or an ethoxylated derivative with a molecular weight of between 400 and 1 000 of each of these esters.

22. Composition as defined in one of Claims 1 to 18, in which the polyelectrolyte is a homopolymer of acrylic acid partially or completely salified in the form of the sodium salt or of the ammonium salt.

23. Composition as defined in one of Claims 1 to 18, in which the polyelectrolyte is a copolymer of partially or completely salified 2-methyl-2-[(1-oxo-2-propenyl)-amino]-1-propanesulphonic acid (a) and of 2-hydroxyethyl acrylate (b) in an (a)/(b) molar ratio of between 30/70 and 90/10 and very particularly 50/50 and 90/10.

24. Composition as defined in Claim 23, in which the polyelectrolyte is a copolymer of the sodium salt or of the ammonium salt of 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulphonic acid (a₁) and of 10% to 40% of 2-hydroxyethyl acrylate (b) in an (a₁)/(b) molar ratio of between 60/40 and 90/10.

25. Composition as defined in one of Claims 1 to 18, in which the polyelectrolyte is a copolymer of the sodium salt, of the ammonium salt, of the monoethanolamine salt or of the lysine salt of 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulphonic acid (a₁) and of acrylic acid partially or completely salified in the form of the sodium salt, of the ammonium salt, of the monoethanolamine salt or of the lysine salt (c₁) in an (a₁)/(c₁) molar ratio of between 30/70 and 90/10 and very particularly between 30/70 and 45/55.

26. Composition as defined in one of Claims 1 to 18, in which the polyelectrolyte is a copolymer of the sodium salt or of the ammonium salt of 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulphonic acid (a₂) and of

acrylamide (d) in an (a₂)/(d) molar ratio of between 50/50 and 30/70.

27. Composition as defined in any one of Claims 1 to 26, characterized in that the polyelectrolyte is crosslinked and/or branched with a diethylenic or polyethylenic compound in the molar proportion, expressed with respect to the monomers employed, of 0.005% to 1% and preferably of 0.01% to 0.5% and more particularly of 0.1% to 0.25%.

28. Composition as defined in Claim 27, characterized in that the crosslinking agent and/or branching agent is chosen from diallyloxyacetic acid or one of its salts, such as sodium diallyloxyacetate, ethylene glycol dimethacrylate, ethylene glycol diacrylate, diallylurea, trimethylolpropane triacrylate, methylenebis(acrylamide), triallylamine or a mixture of these compounds.

29. Composition as defined in any one of Claims 1 to 28, characterized [lacuna] that it comprises from 4% to 10% by weight of emulsifying agents.

30. Composition as defined in Claim 29, in which from 20% to 50% and more particularly from 25% to 40% of the total weight of the emulsifiers are of the water-in-oil type and from 80% to 50% and more particularly from 75 to 60% by weight are of the oil-in-water type.

31. Composition as defined in any one of Claims 1 to 30, characterized in that the oil phase represents from 15% to 40% and preferably from 20% to 25% of its total weight.

32. Composition as defined in any one of Claims 1 to 31, characterized in that it additionally comprises one or more additives chosen from complexing agents, transfer agents or chain-limiting agents.

33. Cosmetic, dermocosmetic, dermopharmaceutical or pharmaceutical composition, characterized in that it comprises from 0.1% to 10% by weight of the composition as defined in any one of Claims 1 to 32.

34. Cosmetic, dermocosmetic, dermopharmaceutical or pharmaceutical composition as defined in Claim 33, in the form of a milk, of a lotion, of a gel, of a cream, of a soap, of a foam bath, of a balm, of shampoo or of a conditioner.
- 5 35. Use of a composition as defined in one of Claims 1 to 34 in preparing cosmetic, dermocosmetic, dermopharmaceutical or pharmaceutical compositions.